
MANUFACTURING METHOD FOR A CERAMIC TO METAL SEAL

ABSTRACT

The invention is a method of bonding a ceramic part to a metal part by heating a component assembly comprised of the metal part, the ceramic part, and a very thin essentially pure interlayer material of a compatible interlayer material placed between the two parts and heated at a temperature that is greater than the temperature of the eutectic formed between the metal part and the metal interlayer material, but that is less than the melting point of either the interlayer material, the ceramic part or the metal part. The component assembly is held in intimate contact at temperature in a non-reactive atmosphere for a sufficient time to develop a hermetic and strong bond between the ceramic part and the metal part. The bonded component assembly is optionally treated with acid to remove any residual free nickel and nickel salts, to assure a biocompatible component assembly for implantation in living tissue.